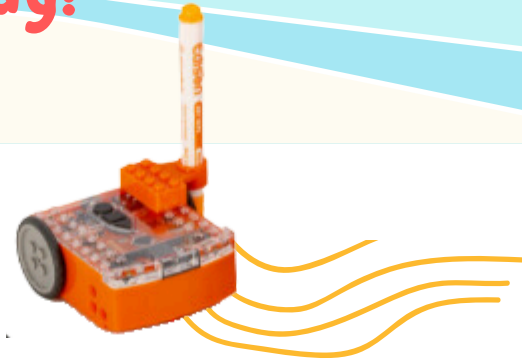


Delightful Doodle Day!



STEM
(40 min)

Materials:

- Robots
- Why Bricks (optional)
- 8-10 Delightful Doodle Mats
- Erasable Markers
- Rubber Bands
- EsSketch Bricks to Hold Markers
- TV Remote Control
- Butcher paper, clear shower curtains, sheets or tablecloths



LET'S CREATE SOME ROBOT ART!

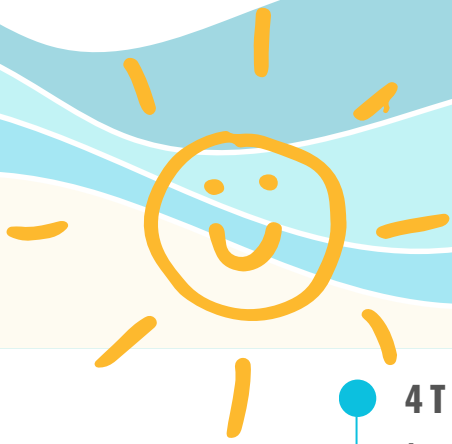
Set up:

1. First, lay down your butcher paper, sheets, tablecloth or shower curtains on the ground (This is to protect the flooring from being drawn on). Place 5-8 of The STEM Taught Delightful Doodle robotic mats down. We suggest using an open room for this activity like the multipurpose room or outdoors in a shady area. There can be 2-3 students per mat.
2. Fill 2-3 bamboo trays or plates with Why Bricks (for the older students) and the regular Legos (for the younger students), and set them around each mat. Also lay out a tray of markers at each mat.
3. Hand out one robot and one remote control to each student.

KINDER-3RD GRADE

Instructions:

1. First, get the students excited for today's challenge! You could say, "Who's ready for to create their very own art with their robots?" "I can't wait to see the beautiful art that you all make!"
2. Instruct the students take their robots and remote control down to one of the Delightful Doodle Mats. Two to three students can be at one mat.
3. Demonstrate how to Barcode scan the remote to the robot. The instructions to do this are on the mat. If the students want to try themselves that's okay as well. Have students that know how go around and help others.
4. The students will do a small Lego build, then attach the EdSketch brick. Then they will put the marker into the brick, set the robot on the Doodle mat, and let the drawing fun begin! They will use the remote to move their robot around on the mat to make their own drawing's.



4TH - 8TH GRADE

Instructions: .

1. First, get the students excited for today's challenge! You could say, "Who's ready for to create their very own art with their robots?" "I can't wait to see the beautiful art that you all make!"
2. The students will bring their robot and chrome books down to a mat. Two to three students per mat.
3. They will now do a Lego build on top of their robots using the Why Bricks.
4. Next, they will attach a dry-erase marker to their build using a rubber band.
5. When they are done attaching their marker, they will open their chrome books or laptops and go to stemexpandedlearning.com. Here they will go to programs and choose robotics. They will see 4 circles on the next screen. The third circle says "Use Scratch." Click on the orange box that says "Access EdScratch." It will then prompt you to choose Edison V2 or V3. Choose V3. Here's where the magic begins. Using the drive tab, they will choose one block at a time out of the first four blocks (the forward, backwards, spin left, or spin right) by clicking on it and then dragging it over to the yellow START block. Make sure the block is all the way connected. From here they can add multiple blocks by just clicking and dragging them to attach to what they've already started.
6. When they are finished with their coding they will take the USB from underneath the robot and insert it into the computer. Now They will need to click on program in the righthand corner of the screen. Choose Edison V3, then press the connect button. It will make a happy noise when ready. Unplug and set the robot on the Doodle mat.
7. Watch and see the beautiful art that they create!

HOLLIE'S HELPFUL HINTS!

1. Most of the art will be abstract but if the students want a challenge, they could try make an object. I've asked the student's to draw a square with their robots before and this is a really good challenge for them. They could also draw flowers, snow man, the sun and other different shapes. The possibilities are endless!

